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Changing technology, threats and warfighting environment: a new acquisition and doctrinal paradigm for EW ... or have we been here before?

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Is this completely new?

Our Nations face:

- New threats
- New technologies
- A new (cognitive) war-fighting environment

So do we need a new acquisition and doctrinal approach?

Have we have been here before, and can we learn lessons from how our predecessors managed step changes in threats, technology, and the nature of warfare?

2 case studies to consider:

- Mechanisation (1930s onwards) and
- Digitisation (1990s onwards)

Changes we face

- Changing and varied threats
- Unclear boundaries on conflict
- Moore's Law (pace of change)
- Barriers to entry ('technological threshold')
- New cognitive environment
- Use/mis-use of information

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What mechanisation changed



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What mechanisation changed



- pace of land conflict
- skills required of soldiers
- options available to commanders
- relationship between armies and industrial base



What mechanisation changed



- pace of land conflict
- skills required of soldiers
- options available to commanders
- relationship between armies and industrial base

... and how it was handled

- rapid revision of doctrine
- changes to training and skills
- commanders' education; new options
- close working with industrial base



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What digitization changed



What digitization changed



- security, thus speed
- volume of information
- non-hierarchical information
- size of HQs
- barriers to entry



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... and how it was handled

- co-ord procedures
- raised expectations
- complex processes
- follows civilian technologies
(military R&D does not lead)



Lessons we could apply

- **Clarifying** the capability:
 - don't over-complicate doctrine
- **Understanding** the capability:
 - other Lines of Development; training, support
- **Mainstreaming** the capability:
 - military decision making process, COAs, targeting
- **Developing** the capability:
 - cars aren't just fast horses (*Henry Ford, 1911*)
- **Industrialising** the capability:
 - war is won in the factories (*Joseph Stalin, 1949*)

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Conclusion

Changing technology, threats and warfighting environment: a new acquisition and doctrinal paradigm for EW ... or have we been here before?

'YES ... let's learn from past experience'

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